Idaho Drought Task Group News Bulletin

Spring 2003

This newsletter is published by the Idaho State Department of Agriculture in cooperation with industry groups and other State and Federal agencies, to provide information to Idaho's livestock producers on how to lessen the impacts of drought. Suggestions and articles from readers are encouraged.

Many of us are concerned with below average snowpack and bleak long range forecast for precipitation. In the interest of coordination and reducing potential conflicts and hardships, the Idaho Department of Agriculture in cooperation with the Idaho Cattle Association, Idaho Woolgrowers, Idaho Farm Bureau, and other state and federal agencies has developed the Idaho Rangeland Drought Task Group. This group will work under the umbrella of the Idaho Water Supply Committee (WSC). In the past, the WSC dealt primarily with water supply for agricultural irrigation, power production, and recreation water supply related to snowpack and river flows. In years that drought conditions develop, the WSC would report to the governor with recommendations for action. Occasionally, in the case of severe drought conditions, the Bureau of Land Management and USDA Forest Service have participated with updates and projected implications to management on lands they administer. However, generally the efforts to address drought related issues on rangelands has been inadequate. The intent of the Task Group is to present possible alternatives to producers and facilitate coordination between the state and federal land management agencies.

Message From Industry Groups

The organization of the Idaho Drought Task Group will be of great service to Idaho ranchers if this drought continues. This bulletin provides valuable information that we hope you will put to good use.

The Farm Service Agency's Emergency Conservation Program will be the first aid available. Contact your County FSA Committee. They may be able to assist in wells, pipelines, springs, water hauling and such.

The BLM and the USFS have both assured us that they are ready to sit down and seek ways to adjust your grazing plans for one year to help protect you, your herd and your range from another year of drought. Options may include adjusting turnout, movement, and removal times and providing alternative water sources. We are lucky to have an administration that is willing to be flexible. We should use this opportunity responsibly. Then future administrations might also work with us during emergencies like this.

If we work together we will all come through these times in better shape. Please call if you have questions or comments.

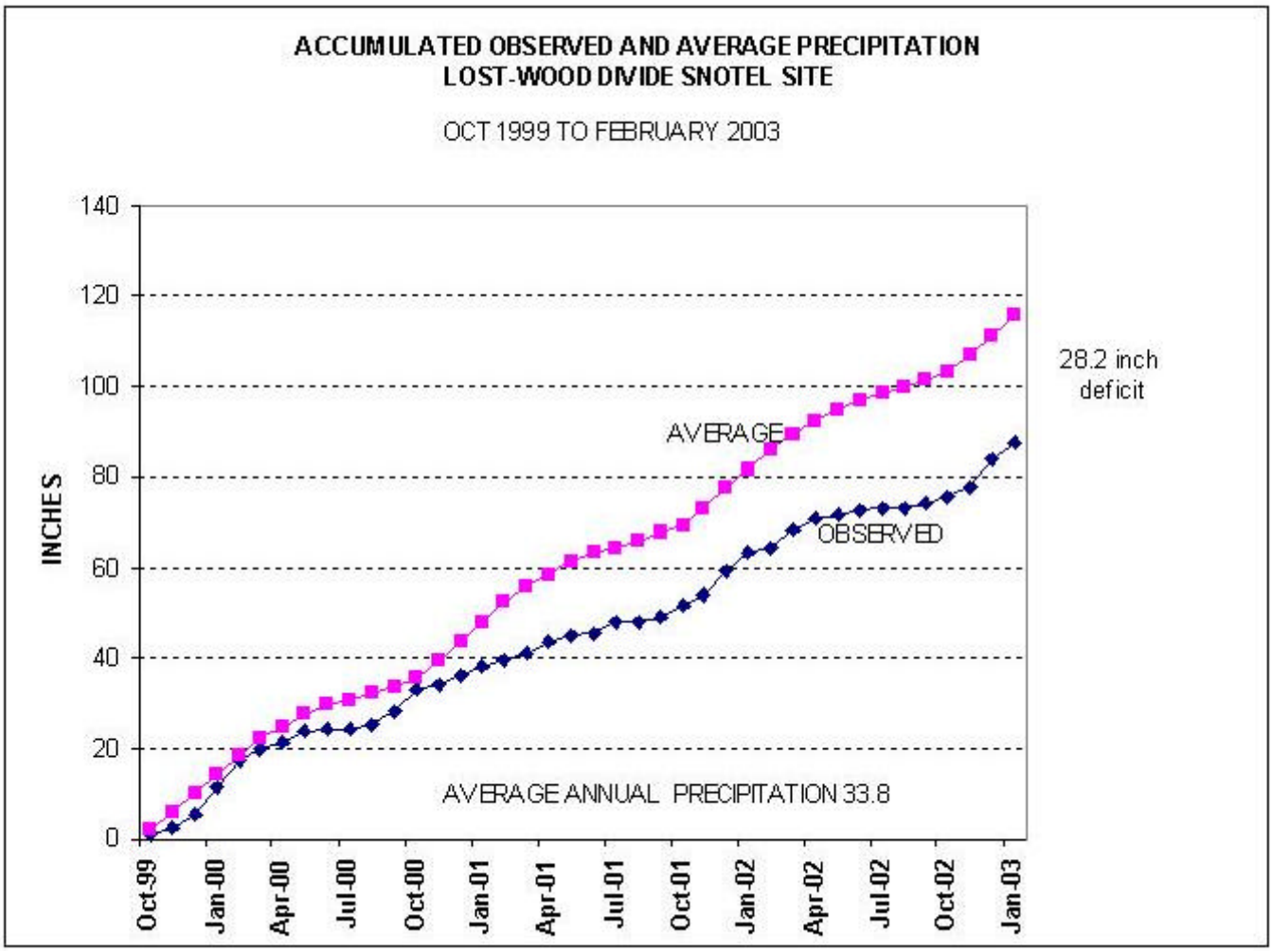
Idaho Cattle Association
Idaho Farm Bureau Federation
Idaho Woolgrower's Association

Forecast

Though it is much too early to predict how forage conditions will develop, we can be reasonably sure that livestock water supply will be diminished across much of Southern Idaho. Midway through the 2003 water year, it appears that Idaho will experience the third consecutive year of below normal moisture accumulation. Since the spring of 2000, all areas of the state south of the Clearwater River basin have received below normal precipitation to varying degrees. The 2001 water year was one of the driest on record for many river basins including the Boise, Big Wood and Upper Snake. The 2003 water year has been especially lacking in moisture for basins south of the Snake River and from the Owyhee in the west to the Bear River basin in southeast Idaho.

This continuing drought has the potential to negatively impact rangelands and affect their use, even if we receive normal rainfall this spring. Springs, seeps, small streams and even wells that are sources for stock water could be dry or flow at only a fraction of their normal amount due to the cumulative drought conditions. In addition, diminished precipitation during the spring could reduce forage production on Idaho's rangelands.

The graph below illustrates the magnitude of the precipitation deficit that has developed at the Lost-Wood Divide site in the headwaters of the Big Lost River above Mackay. Since October 1999 we have accumulated a deficit of over 28 inches, or almost a whole year's worth of precipitation! Three years of above normal precipitation will be needed to restore ground water conditions.



The latest 90-day forecast (March, April, May 2003) issued by the National Oceanic and Atmospheric Administration's Climate Prediction Center calls for above normal temperatures over the entire Western U.S. The corresponding forecast for precipitation did not indicate a tendency to depart from average.

What To Do

Though there is certainly no need to panic, it may be advisable to look ahead in your operation and try to foresee potential shortfalls in forage or livestock water supply. Living in an area where below normal precipitation is common, range livestock producers should already have a long-range plan for dealing with drought. Even if we have timely spring rains and forage production is adequate, the nature of the Southern Idaho climate will ensure an extended drought period sometime in the near future. Early planning enables ranchers to carefully consider potential alternatives for their summer grazing plans during and after extended drought. Waiting to plan until June or July leaves fewer options available.

While the following are suggestions for possible actions to lessen the impacts of drought, we recognize that it's important for you to evaluate the cost/benefit ratio of any of the suggested options with alternatives such as drylot feeding, private pasture, or destocking and to consider how they impact your overall operations.

Water Supply

While it's too early to predict how much forage will be produced in 2003, we are starting the year off with a three-year deficit in stored water, snow pack and soil moisture. This means less runoff from watersheds resulting in reduced stream flows, some springs drying up, less water for irrigation, and in some cases, less water available for range livestock. Now is the time for producers to make plans on how to deal with potential livestock water shortages.

When normal range livestock water supplies are reduced, the results can be 1) poor livestock performance and condition and 2) range damage caused by localized overuse. Locating additional sources or augmenting current sources of stock water is critical for maintaining profitable livestock gains and avoiding damage to the range resources.

The following are ideas to consider when addressing potential water shortages. Remember, new water sources on federal lands will require that projects go through the NEPA process. However, improvements on existing sources should not require this clearance and can be worked on immediately. The Bureau of Land Management and Forest Service have stated that hauling water to existing livestock watering facilities will not require additional environmental clearance. The recently passed Agriculture Bill makes available some funding to help offset out-of-pocket expenses. This will be addressed in more detail later.

Springs and Seeps

Areas still exist where springs and seeps can be developed. These water sources are vital during a drought year, and will continue to improve livestock distribution during normal years. If possible, protect the source of the spring by fencing an area large enough to protect the spring from trampling, storing the water in a large tank, then piping it to a trough(s). In this way, you will increase the usability of even a slow-flowing spring or seep. A flow of only half-gallon per minute amounts to 720 gallons per day, which is enough water for 48 cow/calf pairs.

Stock Ponds

Digging stock ponds during a drought may not provide an immediate solution as chances are poor that precipitation will accumulate to fill these ponds. Ponds also lose water through evaporation and seepage. If you do build ponds, dig them relatively deep in relation to surface area. Reducing surface area exposed to the sun and wind will reduce evaporation losses. Evaporation losses can be further reduced by covering tops of ponds with various materials (Butyl rubber, plastic, floating wax, or polystyrene blocks). Adding soil amendments or lining the bottom of the pond with plastic will reduce water loss to seepage.

Fencing the ponds, piping the water to a trough, or reducing access to a water gap, will also conserve water and improve water quality by preventing trampling, which decreases the integrity of the pond's seal and reduces water quality.

Water Hauling

Hauling water may be viable if forage is adequate but normal water sources are inadequate to sustain grazing. Haul water to existing stock tanks, or pump it directly into movable troughs. Using large tanks and piping water to troughs through temporary waterlines on the soil surface is another option.

Plan to water stock in small groups. This will mean more watering locations but less potential damage to range plants and less frequent movement of watering locations. You could haul water on alternate days for mature dry cows or yearlings if you cannot develop adequate storage on site. There should be no permanent weight loss on these classes of cattle with alternate-day watering. However, according to research, alternate day watering of cows with calves will likely result in half-pound less gain per day on the calves. We caution that you are taking a significant risk in trusting your equipment to continue functioning properly in your absence. In the case of a breakdown or equipment failure at the watering site, you could be setting yourself up for hardships that far exceed those of everyday hauling.

Livestock Management

Drylot

You may consider providing supplemental hay or other forages, but this is typically not cost effective. Consider putting the cow herd in drylot in lieu of feeding hay. When drought is severe, drylot feeding of high concentrate or high grain diets may be warranted. This requires careful management, but provides an alternative to high priced forages. In most cases, grains are cheaper per unit of energy than other forages, making them attractive alternatives when forage prices are high.

Private Pasture

Though private pasture is extremely limited in Idaho, there may be cases where, because of water shortages, dryfarm or irrigated crops did not adequately develop to justify harvest but may be very suitable for grazing. However, be aware of nitrate poisoning. Drought stricken cereal grains, and some weedy forbs (kochia), accumulate nitrate levels, which are toxic to cattle. See Montana State University Extension publication for more details: http://animalrangeextension.montana.edu/Articles/Forage/Summer/Caution.htm

Destocking

Though destocking is never a preferred alternative, severe or long-lasting drought may necessitate deeper culling. If you have yearlings or stocker cattle, a simple drought management solution is to use yearlings as a forage management tool. During wet years yearlings are utilized to consume excess forage, but during drought years when forage production is lower than expected, they are sold or placed in a feedlot. This system frees up pasture for the cow herd and keeps intact genetic and selection programs within the cow herd. Cull all dry cows and less productive pairs. In all likelihood, you have cows targeted for fall culling due to age, temperament or general lack of social graces. These cows are good candidates to leave the ranch during a drought.

Early Weaning

Even in more normal years many Idaho ranches have adopted early weaning into their annual operations simply to improve weaning weights, improve fall body condition scores of cows, and make their fall pastures last later into the season. Dry cows consume about 35% less forage than lactating cows and 400-lb calves consume about one-third as much as mature cows. Weaning can be done as early as two months of age but generally results are better if you wait until calves are at least three months old. Be sure to discuss an early weaning supplementation and vaccination program with your veterinarian.

How Much To Adjust?

Appropriate adjustments could be the most difficult question. With too much adjustment and you may unnecessarily handicap the economic viability of your operation. With not enough, you could permanently damage your pastures and rangelands.

The first step is to determine how severely the drought has impacted your range vegetation. Research from the Point Springs Experimental Station in the Raft River Valley indicates that April+May+June precipitation accounts for 75% of the annual forage production. Higher elevation rangelands have less annual variation in forage production, as both winter and summer precipitation contribute to production.

A simple way to estimate summer grass production is to evaluate the total April+May+June precipitation. This method appears to correlate well in areas of southern Idaho that do not recieve summer precipitation. But in northern Idaho and the central mountains where summer precipitation is more common, this method is less reliable. Compare this year's amount to the area's long-term median total for April+May+June precipitation. Be sure to use the median because it is a much better reflection of "normal" than the mean (i.e., average). The actual percentage of the long-term median total for April+May+June precipitation that an area receives correlates very well to the amount of forage that will be available in summer. For example, if this year's April+May+June total precipitation for an area equals 75% of the area's long-term median total for April+May+June precipitation, then forage production in summer will likely be 75% of normal. However, after extended drought, total summer forage production may be slightly less than the calculated percentage because of the stress that forage plants endured during the previous years of dry weather.

Special Resource Considerations

Wildlife

Again, keep in mind habitat that is sensitive to other species. Springs and seeps are important for a number of wildlife species. Sage grouse rely on them for water and forage later in the season when upland forage cures out. Consider plumbing the system with float valves and shutoffs so water can remain in the spring system when livestock don't need it.

Slickspot Peppergrass

With the impending listing of slickspot peppergrass as endangered as threatened or endangered, it imperative to keep as many options available to operators as we can. To best do this, we need to do what we reasonably can to conserve the plant and its' habitat. Regardless of drought conditions - for operators on the Lower Snake River Plain where slickspot peppergrass habitat is present - special consideration is needed when placing any new range improvement. To avoid excessive trampling and trailing through slickspot peppergrass populations, we encourage placing temporary and permanent water sources in areas that will not attach livestock too, or encourage traveling through, concentrations of slickspots.

How Stressed Is My Range?

Timing and severity of grazing during the previous season will play a role in how stressed the plants are. Plants stressed most by drought during the previous year were those grazed in late spring and early summer because they were unable to regrow before soil moisture was depleted.

Light or moderate grazing (< 60% utilization) doesn't harm most plants, nor does heavy or severe use in one year if the plants are given an opportunity to recover. Drought related stress is accentuated when heavy or severe use occurs for two or more years in a row. When drought breaks, plants grazed lightly to moderately in the past will recover from drought faster than plants that have been heavily grazed for many years.

Stressed plants begin growth later and grow slower in spring, and most plants will be stressed after three or four drought years regardless of whether they were grazed or not. Consequently, during and after extended drought, your turnout in spring will likely need to be later. The rooting depth of forage plants and the length of drought in an area can help indicate how long plant growth will be delayed in spring. After one or two dry years, growth usually begins earlier in deep rooted versus shallow-rooted plants because deep-rooted plants had access to more soil water and were less stressed. After an extended drought, however, deep-rooted plants may rebound slower because they remained green longer into the growing season and probably received extra grazing pressure during extended drought.

Consider these suggestions to reduce grazing related stress:

- Delay turnout in spring so that forage plants can recover vigor. Delayed turnout will also lessen problems with poisonous plants and grass tetany. In rotational grazing systems, rotate more frequently.
- Consider using any rested pastures and thereby spreading the grazing use this year across all of the pastures.
- For early season grazing this year, try to graze any areas that were ungrazed last year or those areas that were grazed after plant dormancy during last summer's drought.
- For late season grazing this year, try to use those areas that were grazed heavily last year before plant dormancy.

Grasshoppers and Mormon Crickets

Drought often creates optimal survival and hatching conditions for grasshoppers and crickets heightening competition for limited forage range resources. In the last two seasons, localized areas experience heavy outbreaks of both grasshoppers and Mormon crickets that required concertrated control efforts. A potentially heavy outbreak was detected in the area south of the Snake River along the Twin Falls, Elmore, and Owyhee County boundaries in 2002. It is anticipate that this infestation may expand and possibly intensify in 2003. There were also significant infestations along Bennett Mountain in Elmore County, near Richfield in Lincoln County, from Elba to Almo in Cassia County, and south of Malad City in Oneida County.

To review the complete grasshopper/Mormon cricket survey results for 2002, visit the following website: http:// www.idahoag.us/plants/GHTOC.htm

Messages From the Agencies

Forest Service

It is important for you to work closely with your local District Ranger to address drought management issues. This is especially significant for operators who move from BLM administered rangelands to National Forest rangelands where early coordination is needed. Be aware that the lack of livestock water may be the most significant problem on some areas of your allotment. Please assess your operations and make appropriate plans for this grazing season by considering management options such as the following:

- Anticipate the need for going on summer ranges with fewer numbers of livestock. Expect that plant vigor, forage production and livestock water availability may be limited.
- Plan for flexibility in range readiness.
- Anticipate that you may reach allowable use levels early, which may require faster movement through pastures and early removal of livestock from summer rangelands.
- Anticipate the need for more intensive labor investments due to increased problems with livestock distribution including improvement maintenance, herding, water hauling, salt and mineral placement, etc.

Note that utilization standards will apply and grazing management systems will be managed for long-term forest and rangeland health. However, if there are appropriate short-term modifications to grazing practices that may support this goal and relieve impacts caused by the drought, please discuss these issues early with your District Ranger. For those who choose to run less than permitted numbers of livestock, Nonuse for Resource Protection will be formally granted under the Forest Service's administrative procedures.

Bureau of Land Management

Permittees are encouraged to contact the range management people in the field offices early so that their needs can be discussed and alternative plans developed. Communications should be continuous during drought conditions.

The Bureau of Land Management (BLM) must manage rangelands to maintain long-term productivity and rangeland health. Within this framework, there maybe management options that help alleviate some of the drought impacts. As you assess range conditions, some of the alternatives you may consider include supplementing water supplies for livestock water, adjusting grazing systems, reducing the grazing season and/or livestock numbers, and alternative forage supplies. By law BLM cannot allow supplemental feeding on public lands.

Service charges for change applications due to drought will be waved. Non-use for conservation purposes will be authorized and unused portions grazing fees that have been paid will be refunded.

Idaho Department of Land

Idaho Department of Lands (IDL) grazing allotments vary from low elevation, low precipitation zones to high elevation, high precipitation zones, so it is very difficult to prescribe any one drought management action. IDL encourages all grazing lessees to contact their local IDL range staff to discuss grazing options if drought effects are a concern. IDL range managers will make every attempt to ensure there is good coordination between the state and federal agencies concerning grazing management. Lessees who have state leases grazed in common with federal allotments where grazing is reduced due to drought conditions should notify IDL of changes as soon as possible. Any adjustment to allowable use on IDL grazing leases must be documented in a Lease Adjustment form signed by both the IDL representative and the grazing lessee. Information concerning IDL Area Office locations, phone numbers or resource managers can be found at the IDL web site (www2.state.id.us/lands).

Where Can I Get Assistance?

Technical Assistance

The Natural Resource Conservation Service and Idaho Department of Agriculture both have staff that can assist in developing alternatives to help you through the drought period. Assistance from the NRCS is available through your local USDA Service Center. Visit with your range management specialists with the Bureau of Land Management, Forest Service, and Idaho Department of Lands. Personnel in each of these agencies can help you explore and develop alternatives.

Financial Assistance

The Emergency Conservation Program (ECP) provides emergency funding for farmers and ranchers for carrying out emergency water conservation measures during periods of severe drought. When severe drought conditions exist, the determination to implement the program will be made by the Deputy Administrator for Farm Programs (DAFP), FSA. A 30% loss of precipitation in the prior 12 months must be documented when the program is requested.

Drought emergency practices are available to provide water conservation and enhancement measures to permit grazing of range, pasture, or forage by livestock, and to provide emergency water for confined livestock operations.

Drought emergency practices include: wells, pipelines, troughs, tanks, springs, seeps, dugouts, and costs (contractors, truck rental, and labor) for hauling water for livestock.

Cost-share levels of 50 to 64 percent are available for the ECP drought practices.

Contact your local FSA County Office for additional information regarding ECP and other assistance other programs that become available through out the year.

Would you like information Via Email?

If you would like to receive drought information via email, please contact Ken Crane at kcrane@agri.state.id.us.

Additional Information

Attached are a number of websites that have additional information concerning managing through a drought period. If you have internet access these are very worthwhile to visit. Many have additional links to useful information.

Management

- Montana State University Range Extension
  http://animalrangeextension.montana.edu/Articles/Expire/MSU%20Nut%20Conf%20proc.pdf
  http://animalrangeextension.montana.edu/Articles/Forage/Main-grazing.htm
  http://animalrangeextension.montana.edu/Articles/Beef/Main-Drought.htm

- Oregon State University Range Extension
  http://oregonstate.edu/dept/range/grazier.htm

- University of Arizona
  Rangeland Management Before, During, and After Drought
  http://ag.arizona.edu/pubs/natresources/az1136.pdf

- Supplementation During Drought
  http://ag.arizona.edu/pubs/natresources/az1026.pdf

- North Dakota State University
  http://www.ag.ndsu.nodak.edu/drought/ds-26-02.htm

Drought Forecast/Information

- Seasonal Drought Outlook
  http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

- Idaho NRCS Water Supply Outlook
  http://www.id.nrcs.usda.gov/snow/water.htm

- Idaho NRCS Snow Surveys
  http://www.id.nrcs.usda.gov/snow/

- Idaho Department of Agriculture
  http://www.idahoag.us/

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